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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,015	01/15/2002	Andrew Rainis	005950-720	5706

7590 08/13/2003

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EXAMINER	
PARSA, JAFAR F	
ART UNIT	**PAPER NUMBER**
1621	

DATE MAILED: 08/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.	Applicant(s)
10/047,015	Rainis et al
Examiner	**Art Unit**
J. Parsa	1621

-- The MAILING DATE of this communication appears on the cover sheet with the corresp ndence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *three* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *Jan 14, 2002*.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-36* is/are pending in the application.

4a) Of the above, claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-36* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). *5-6*
4) ☐ Interview Summary (PTO-413) Paper No(s). _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 1-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook et al (USPN 5,895,506) in view of Quimby et al (Gas Chromatography December 1997) and further in view of Wittenbrink et al (USPN 6,274,029).

Applicants' claimed invention is directed to methods for producing substantially paraffinic Fischer-Tropsch product or a blended Fischer-Tropsch product comprising a selected oxygenate

concentration, and if required, a selected oxygenated concentration of specific individual oxygenates are disclosed. The method of the present invention measure oxygenate concentration using GC-AED. The oxygenate measurements obtained using GC-AED may be used to adjust and control various processes used to produce, upgrade, or finish Fischer-Tropsch products to provide Fischer-Tropsch products with a selected oxygenate concentration, and if required, a selected oxygenate concentration of specific individual oxygenates. The process further comprising isolating oxygenated species from the Fischer-Tropsch product by distillation, extraction, adsorption, hydrotreating, hydrocracking and combination thereof.

Cook teaches a process for producing a distillate fuel containing substantially paraffinic Fischer-Tropsch product comprising:

a) separating the product of a Fischer-Tropsch process into a heavier fraction and a lighter fraction,

b) further separating the lighter fraction into at least two fraction, (I) at least one fraction including alcohols and (ii) at least one fraction including olefins and acids,

c) irradiating the fraction (I) with IR radiation,

d) measuring the absorption spectrum of the IR radiation,

e) determining a number representative of the concentration of at least one of alcohols, olefins and acids in the fraction (I),

f) adjusting the temperature of the separator in response to concentration to change the concentration to predetermined values,

g) hydroisomerizing at least a portion of the (b) (ii) fractions at hydroisomerization conditions and recovering the hydroisomerization product, and

h) blending at least a portion of hydroisomerization product (see claim 1).

The claims differ from the reference by reciting a gas chromatography equipped with atomic emission detector to measure the concentration of the oxygenated species in the substantially paraffinic Fischer-Tropsch product. However, Quimby et al teaches a gas chromatography equipped with atomic emission detector to analyze sulfur, nitrogen and oxygen containing compounds in gasoline and diesel fuel range (see page 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a gas chromatography equipped with atomic emission detector to enhance analytical confidence by confirming the presence of elements in the chromatography using atomic emission spectra.

The independent claims further differ isolating oxygenated species from the Fischer-Tropsch product by extraction, adsorption, hydrotreating, hydrocracking and combination thereof. However, Wittenbrink teaches a similar process for preparing synthetic diesel fuel or blending stocks using Fischer-Tropsch process. Oxygenated compound including alcohol and some acids are produced during Fischer-Tropsch process, but in at least one well known process, oxygenates and unsaturates are completely eliminated from the product by hydrotreating. However, when the oxygenates were removed, for example by extraction, absorbtion over molecular sieves, hydroprocessing to a level of less than 10 ppm wt% oxygen (water free basis) in

the fraction was being tested, the lubricity was quite poor (see col. 4, lines 51-67, col. 5, lines 1-3, col. 5, lines 48-53, Example 1, and Example 7-8). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to isolate the oxygenated species from the Fischer-Tropsch product by distillation, extraction, adsorption, hydrotreating, hydrocracking and combination thereof to a pre-selected value in order to enhance the lubricity, oxidative stability and high cetane number as shown by Wittenbrink et al.

Any inquiry concerning this communication from the examiner should be directed to J. Parsa, whose telephone number is (703)308-4615. The Examiner's normal work hours are Monday-Friday from 8:00 a.m. to 4:30 p.m. If Examiner is not in, please leave a message. Your call will be return as soon as possible. Any general inquiry of a general relating to the status of this application should be directed to the Group 1600 receptionist whose telephone number is (703)308-1235. The Examiner's supervisor, Johann Richter, may be reached at (703)308-4532. Communications may now be transmitted via FAX directly to group 1600. The group 1600 FAX machine number is (703)872-9306.

J. PARSA
PRIMARY EXAMINER

August 5, 2003